

REMARKS

1. In an Office Action dated 4/29/99 in the parent application, the Examiner issued a final rejection. In the Office Action, the Examiner allowed claims 1-13, 18-22, 30, 32-35, 40-42, 57-60, 63-80, 82-91, 96-99, 104-106, 124, 125, 148, 149, 152, 153 and 162-164. The Examiner objected to the wording of claims 101, 102 and 128 and indicated that the claims would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. The Examiner rejected the other claims in the parent application on the basis of prior art.

In response to the Office Action dated 4/29/99 in the parent application, applicant filed a proposed amendment under Rule 116 on 7/12/99, and then first and second supplemental amendments under Rule 116. The second proposed supplemental amendment under Rule 116 was filed on July 29, 1999.

In an Advisory Action dated 8/10/99, the Examiner indicated that the Examiner would not enter the proposed amendments filed under Rule 116 in response to the final rejection filed 7/12/99, but would continue to allow claims 1-13, 18-22, 30, 32-35, 40-42, 57-60, 63-80, 82-91, 96-99, 104-106, 124-125, 148, 149, 152, 153 and 162-164 and would continue to object to claims 101, 102 and 128.

In response to the Advisory Action dated 8/10/99 in the parent application, applicant filed a third proposed supplemental amendment under Rule 116 in the parent application on August 20, 1999. In this proposed supplemental amendment, applicant retained only allowed claims 1-13, 18-22, 30, 32-35, 40-42, 57-60, 63-80, 82-91, 96-99, 104-106, 124, 125, 148, 149, 152, 153 and 162-164 and rewrote claims 101, 102 and 128 in independent form to include all of the limitations of the base claim and any intervening claims. Applicant made minor cosmetic changes in claims 18, 70 and 85 to correct informalities noted by applicant's attorney in these claims. The third supplemental amendment was filed to obtain an allowance of the parent application.

On August 19, 1999, applicant filed a continued prosecution application and a preliminary amendment in the continued prosecution. In the preliminary amendment, applicant included the claims which were finally rejected by the Examiner in the parent application. The claims filed in the continued prosecution application claims were included in the preliminary amendment in the amended form in which they were presented in the amendment filed under

Rule 116 on July 19, 1999, in the parent application. These included claims 23-29, 36-39, 45-56, 61, 62, 92-95, 100, 103, 107-113, 122, 123, 126, 127, 147, 154-157 and 159-161.

In an Office Action dated 12/29/99 in the continued prosecution application, the Examiner rejected claims 1-13, 18-30, 32-113, 122-128, 146-149 and 152-164 as anticipated by Crane patent 5,944,609. The Examiner also cited of record Barton et al. patent 5,888,135. The Crane and Barton patents are assigned of record to the assignee of record of this continued prosecution application. As will be seen, the Office Action by the Examiner in the continued prosecution application included the rejection of the claims which were allowed in the parent application and which, on the basis of the retention of the claims in the parent application, were not officially in this continued prosecution application.

It is important for the record to show in this continued prosecution application that all of the claims rejected in this continued prosecution application as anticipated by Crane and retained in this amendment should be specifically indicated in the record in this continued prosecution application to be allowable over Crane. Applicant has accordingly prepared this amendment in this continued prosecution application in response to the Office Action dated 12/29/99 on the basis that claims 1-13, 18-30, 32-113, 122-128, 146-149 and 152-164 are considered to be included in this continued prosecution application prior to the preparation of this amendment. In this amendment, applicant has canceled claims 21, 43, and 155-158 so that claims 1-13, 18-20, 22-30, 32-42, 44-113, 122-128, 146-149, 152-154 and 159-164 are considered to be still included in the continued prosecution application after the filing of this amendment. Some of these claims have been amended in minor respects to correct informalities noted by applicant's attorney upon a further study of the claims. As now written, the claims are believed to be definite. Other claims have been amended to provide a sharpened patentable distinction over Crane patent 5,944,609.

2. Claims 1-13, 18-20, 22-30, 32-42, 44-113, 122-128, 146-149, 152-154 and 159-164 have been rejected under various sections of 35 U.S.C. § 102 as being clearly anticipated by Crane. Applicant notes that the Crane patent has been assigned of record to the assignee of record of this application. When applicant's attorney wrote the claims in the parent application, applicant's attorney had the Crane patent in mind and wrote the claims specifically to avoid the Crane patent. As the Examiner will note from the subsequent discussion analyzing each claim

individually with respect to Crane, the claims remaining in the application actually do distinguish patentably over Crane.

The Examiner appears to have indicated on page 2 of the Office Action that Crane discloses a central station, pads interrogated by the central station and lights on the vehicles and the pads. Applicant admits that the Crane patent and this continued prosecution also disclose a central station, pads interrogated by the central station and the disposition of lights on the vehicles and the pads. However, this application discloses a system which is considerably more advanced and sophisticated than the Crane system. These advances are recited in the claims, as seen from the following discussion which specifies for each claim the recited features that are not disclosed by Crane:

Claim 1. Allowable over Crane in the recitation in lines 12-17 and the recitation in lines 19-21. Crane does not disclose a system in which a vehicle can be operated simultaneously by two (2) different pads.

Claim 2. Allowable over Crane because it is dependent from claim 1.

Claim 3. Allowable over Crane because it is dependent from claim 2. Also allowable over Crane because it recites in lines 2-11 additional details for the control in the operation of the vehicle by two (2) different pads.

Claim 4. Allowable over Crane because it recites in lines 11-16 and in lines 17-22 the simultaneous control in the operation of the vehicle by two (2) different pads.

Claim 5. Allowable over Crane because it is dependent from claim 4. Also allowable over Crane because it recites in lines 2-7, lines 8-11 and lines 12-18 the simultaneous control in the operation of the vehicle by two (2) different pads.

Claim 6. Allowable over Crane because it recites in lines 16-19 the inclusion of an additional switch in the vehicle for providing in a first state of the switch for the operation of the vehicle by the first pad and in a second state of the switch for providing for the simultaneous operation of the vehicle by the first pad and another pad.

Claim 7: Allowable over Crane because it is dependent from claim 6.

Claim 8. Allowable over Crane because it is dependent from claim 6.

Claim 9. Allowable over Crane because it recites (a) in lines 8-10 the simultaneous control over the operation of a vehicle by two (2) pads when the commands from

the pads are complementary and (b) in lines 12-15 the ignoring by the vehicle of the commands from the two (2) pads when the commands are contradictory.

Claim 10. Allowable over Crane because it is dependent from claim 9. Also allowable over Crane because it recites in lines 2-4 means responsive in the vehicle to the discontinuance of one of the pads in addressing the vehicle for continuing the response of the vehicle to the addresses and commands from the other one of the pads.

Claim 11. Allowable over Crane in the recitation in lines 12-16 that each of the pads includes a switch operable in a first state to provide for an operation of the vehicle by only one pad and operable in a second state to provide for an operation of the vehicle simultaneously by the one pad and another pad.

Claim 12. Allowable over Crane because it is dependent from claim 11.

Claim 13. Allowable over Crane because it is dependent from claim 12. Also allowable over Crane in the recitation in lines 7-9 that the central station is operable to send the vehicles only changes in the addresses and commands from the pads relative to the addresses and commands previously sent by the pads to the vehicles.

Claim 18. Allowable over Crane in the recitation in lines 14-20 of an additional switch operable in a pad to select a vehicle previously selected by the pad, as a result of the storage in the memory of the identification of the previously selected vehicle, after the pad has selected another vehicle.

Claim 19. Allowable over Crane because it is dependent from claim 18.

Claim 20. Allowable over Crane in the recitation in lines 25-27 of the operation of a vehicle by two (2) pads.

Claim 22. Allowable over Crane because it is dependent from claim 20.

Claim 23. Allowable over Crane in the recitation in lines 16-18 and 19-25 of means in the central station for interrogating an additional pad at the instant of the connection of such additional pad to the central station and for sending the signals from the additional pad to the vehicle addressed by such additional pad instantaneously after the additional pad is connected to the central station. In effect, the central station gives a priority to the additional pad when the additional pad is connected to the central station.

Claim 24. Allowable over Crane because it is dependent from claim 23.

Also allowable over Crane in the recitation in lines 2-4 of third means in the central station for providing for the sending at each instant by the second means of only the commands from the pads which are providing changes in addresses or commands at that instant.

Claim 25. Allowable over Crane because it is dependent from claim 23. Also allowable over Crane in the recitation in lines 2-7 that the central station gives priority to the elimination of the interrogation of a pad by the central station at the instant that the pad is disconnected from the central station.

Claim 26. Allowable over Crane in the recitation in lines 17-22 that the central station eliminates from interrogation by the central station of any pad disconnected from the central station at the instant that the pad is disconnected from the central station.

Claim 27. Allowable over Crane because of its dependency from claim 26. Also allowable over Crane because of the recitation in lines 2-4 of third means in the central station for providing for the transmission at each instant by the second means only of the commands from the pads which are providing changes in addresses or commands at that instant.

Claim 28. Allowable over Crane because it recites in lines 16-21 means responsive in the central station to contradictory commands from a pair of pads for converting such commands to signals providing specialized commands different from the contradictory commands provided by the pads.

Claim 29. Allowable over Crane because it is dependent from claim 28. Also allowable over Crane because it recites in lines 2-3 means in the central station for providing at each instant only the commands from the pads which are providing changes in addresses or commands at that instant.

Claim 30. Allowable over Crane because of (a) the recitation in line 9 that the central station provides start signals at a particular rate and (b) in the recitation in lines 14-18 of means responsive in each of the vehicles to the start signals from the central station for determining the particular rate of occurrence of the start signals and for providing for the response of the vehicle, at the particular rate of occurrence of the start signals, to first signals representing the individual address of the vehicle and to second signals providing commands for the vehicle.

Claim 32. Allowable over Crane because it is dependent from claim 30. Also allowable over Crane because it recites in lines 2-5 that the central station is operative in a

second mode to provide for the addressing of each individual one of the vehicles by at least two (2) pads.

Claim 33. Allowable over Crane in the recitation (a) in lines 21-22 of third means in the central station for providing a plurality of start signals at a particular rate and (b) in lines 23-27 of fourth means responsive in each of the vehicles to the start signals at the particular rate for operating upon first signals in each of the pads at the particular rate to identify the address individual to such vehicle and for operating upon second signals at the particular rate to identify the commands related to the address individual to such vehicle.

Claim 34. Allowable over Crane because of its dependency from claim 33. Also allowable over Crane in the recitation in lines 2-5 of sixth means associated in the central station with the second means for providing for the transmittal to the vehicles by the second means at each instant only of the signals representing changes in addresses or commands from the pads at that instant.

Claim 35. Allowable over Crane because it is dependent from claim 33. Also allowable over Crane because it recites in lines 2-6 that each of the pads includes an additional switch providing in a second state of operation for addressing of a vehicle by the pad and at least another one of the pads.

Claim 36. Allowable over Crane in the recitation in lines 11-14 of second means responsive in each vehicle to the same identity of the signals providing the

commands in two (2) successive packets addressed to the vehicle by the central station for operating such vehicle in accordance with the patterns of the signals in such packets.

Claim 37. Allowable over Crane because it is dependent from claim 36.

Claim 38. Allowable over Crane because of its dependency from claim 36. Also allowable over Crane because of the recitation in lines 2-4 of means in the central station for transmitting at each instant only the binary indications from the pads which are providing changes in addresses or commands at that instant.

Claim 39. Allowable over Crane because of its dependency from claim 38. Also allowable over Crane because of the recitation in lines 2-5 of means in the central station for simultaneously interrogating the pads to obtain simultaneous binary indications from the pads of the individual ones of the vehicles addressed by such pads and the binary indications providing the commands for operating the individual ones of the pads. Crane discloses only a cyclic

interrogation of the pads by the central station and only a cyclic response of the pads to the cyclic interrogations by the central station.

Claim 40. Allowable over Crane in the recitation in lines 21-26 that the first and second motors operate at the same speed, without any progressive increments in speed, when one of the motors has been previously operated at a different speed than the other motor, the same speed constituting the higher of the speeds provided by the first and second motors.

Claim 41. Allowable over Crane because it is dependent from claim 40. Also allowable over Crane in the recitation (a) in lines 2-6 of fourth means responsive in the vehicle to the first and second signals received by the vehicle from the central station for converting the first and second signals to pulse width modulations in progressive instants of time, the pulse width modulations for each of the first and second motors at each instant having duty cycles dependent upon the speed at which such motor is to be operated at that instant and (b) in the recitation in lines 7-9 that the operation of the second and third means at each instant is dependent upon such pulse width modulations at that instant and the duty cycles of the pulse width modulations at that instant.

Claim 42. Allowable over Crane because it is dependent from claim 40.

Claim 44. Allowable over Crane because it is dependent from claim 45.

Additionally allowable over Crane in the recitation in lines 2-5 of sixth means responsive in the vehicle to the first and second signals received by the vehicle from the central station for accelerating the first and second motors in progressive increments to the

speeds commanded by the central station to such motors for movement of the vehicle in the longitudinal direction.

Claim 45. Allowable over Crane in the recitation in lines 24-27 of fifth means responsive in the vehicle to the first and second signals received by the vehicle from the central station for operating the first and second motors in accordance with such first and second signals only when the first means has received the same first and second signals from the central station a plurality of successive times.

Claim 46. Allowable over Crane in the recitation in lines 20-22 of means in the central station for providing for the transmittal to the vehicle from the central station only of changes in the address or commands in each of the pads from the address or commands previously provided in the pad.

Claim 47. Allowable over Crane because its dependent from claim 46.

Claim 48. Allowable over Crane because it is dependent from claim 46. Also allowable over Crane in the recitation in lines 2-4 of means responsive in each of the vehicles to the commands addressed to the vehicle relating to movements of the vehicle at

a particular speed for accelerating the vehicle in progressive increments to the particular speed.

Claim 49. Allowable over Crane in the recitation in lines 19-22 of second means responsive in each of the vehicles to the second and third signals received by the vehicle from the central station for accelerating the first and second motors in progressive increments to the speeds commanded by the central station to such motors for movement of the vehicle in the longitudinal direction. Also allowable over Crane in the recitation in lines 23-28 of third means responsive in each of the vehicles to the second and third signals received by the vehicle from the central station for operating the first and second motors at the same speed when one of the motors in the vehicle has been previously operated at a different speed than the other motor in the vehicle, the same speed constituting the higher of the speeds provided by the first and second motors in the vehicle.

Claim 50. Allowable over Crane because it is dependent from claim 49. Also allowable over Crane in the recitation in lines 2-8 of third means responsive in each of the vehicles to the second and third signals received by such vehicle from the central station for movement of each vehicle in the longitudinal direction for operating the first and second motors at the same speed, without any progressive increments in speed, when one of the motors in such vehicle has been previously operated at a different speed than the other motor in such vehicle, the same speed constituting the higher of the speeds provided by the first and second motors in such vehicle.

Claim 51. Allowable over Crane because it is dependent from claim 49.

Claim 52. Allowable over Crane in the recitation in lines 14-16 of second means responsive in each of the vehicles to the second signals addressed to such vehicle for determining whether successive ones of the second signals addressed to such vehicle are identical and in the recitation in lines 17-20 of third means in each of the vehicles for operating such vehicle in accordance with the second signals addressed to such vehicle when the second means in such

vehicle determines that the successive ones of the second signals addressed to such vehicle are identical.

Claim 53. Allowable over Crane because it is dependent from claim 52. Also allowable over Crane in the recitation in lines 2-6 that the third means in each of the vehicles is operative to operate such vehicle in accordance with the second signals addressed to such vehicle in the second of the successive ones of the second signals addressed to such vehicle when the second means in such vehicle determines that the successive ones of the second signals addressed to such vehicle are identical.

Claim 54. Allowable over Crane because it is dependent from claim 52. Also allowable over Crane in the recitation of the fourth means in lines 11-14 and in the recitation of the fifth means in lines 15-20. The fourth and fifth means provide for the operation of a vehicle when it is determined that at least a particular percentage of the successive packets addressed to the vehicle during a particular time period has a first number of first signals and a second particular number of second signals.

Claim 55. Allowable over Crane in the recitation of the second means in lines 17-20 and in the recitation of the third means in lines 21-25. See the discussion in claim 54 for the significance of the second means and the third means.

Claim 56. Allowable over Crane because it is dependent from claim 55.

Also allowable over Crane in the recitation in lines 5-7 of means in the central station for sending to the vehicles at each instant only the binary indications representing changes in the addresses or commands from the pads at that instant.

Claim 57. Allowable over Crane in the recitation of the second means in lines 9-10 and the third means in lines 11-14.

Claim 58. Allowable over Crane because it is dependent from claim 57. Also allowable over Crane in the recitation of the operation of the third means in lines 4-9 in operating the vehicle when the second means in the vehicle determines that the successive ones of the second signals addressed to the vehicle are identical.

Claim 59. Allowable over Crane because it is dependent from claim 57.

Claim 60. Allowable over Crane because it is dependent from claim 57. Also allowable over Crane in the recitation of the sixth means in lines 5-7 and the seventh means in lines 8-12. See the discussion relating to claim 54.

Claim 61. Allowable over Crane in the recitation of the second means in lines 12-15 and the third means in lines 16-20. See the discussion relating to claim 54.

Claim 62. Allowable over Crane because it is dependent from claim 61.

Claim 63. Allowable over Crane in the recitation of the first line in lines 9-11, the recitation of the second plurality of lines in lines 12-15 and the recitation of the third plurality of lines in lines 16-19.

Claim 64. Allowable over Crane because it is dependent from claim 63. Also allowable over Crane in reciting in lines 2-4 additional details for the second lines and in lines 5-7 additional details for the third lines.

Claim 65. Allowable over Crane because it is dependent from claim 63. Also allowable over Crane because of the recitation of additional details of the second lines in lines 2-4 and the third lines in lines 5-6.

Claim 66. Allowable over Crane because it is dependent from claim 63. Also allowable over Crane because of the recitation in lines 3-5 that the interrogation of the pads in the plurality by the central station occurs when the clock signals on the lines in the second plurality have a particular one of the first and second polarities.

Claim 67. Allowable over Crane in the recitation in lines 8-10 of the first line, in lines 11-14 of a second plurality of lines and in lines 15-18 and lines 19-22 of a third plurality of lines.

Claim 68. Allowable over Crane because it is dependent from claim 67. Also allowable over Crane because it recites in lines 2-4 that the second lines in the plurality introduce the clock signals in sequence to the different ones of the pads on a cyclic basis to obtain an interrogation of the pads by the central station when the pads receive the clock signals.

Claim 69. Allowable over Crane because it is dependent from claim 67.

Also allowable over Crane in the recitation in lines 2-4 of the simultaneous introduction of the clock signals by the lines in the second plurality to the different pads to obtain a simultaneous interrogation of the different pads by the central station.

Claim 70. Allowable over Crane because it is dependent from claim 69. Also allowable over Crane in the recitation in lines 3-5 and 6-10 of the functions respectively performed in the first and second polarities of the clock signals.

Claim 71. Allowable over Crane in the recitation of a first line in lines 8-10, a plurality of second lines in lines 11-14 and a plurality of third lines in lines 15-16.

Claim 72. Allowable over Crane because it is dependent from claim 71. Also allowable over Crane in the recitation in lines 3-7 of additional functions for the third lines.

Claim 73. Allowable over Crane because it is dependent from claim 72. Also allowable over Crane in the recitation in lines 2-4 of additional functions for the second lines and in lines 5-8 of additional functions for the third lines.

Claim 74. Allowable over Crane because it is dependent from claim 71.

Claim 75. Allowable over Crane because it is dependent from claim 72. Also allowable over Crane in the recitation in lines 2-4 of additional functions for the second lines and in lines 5-8 of additional functions for the third lines. See also claim 70 concerning the simultaneous introduction of the clock signals by the second lines to the different pads. Lines 5-8 also recite a simultaneous introduction of signals.

Claim 76. Allowable over Crane in the recitation of a first line in lines 8-10, a plurality of second lines in lines 11-14, a plurality of third lines in lines 15-19 and an extension of the third line in lines 19-22.

Claim 77. Allowable over Crane because it is dependent from claim 76. Also allowable over Crane in reciting in lines 4-9 additional functions for the extension of the third lines.

Claim 78. Allowable over Crane because it is dependent from claim 76. Also allowable over Crane because of the recitation in lines 2-11 of additional functions for the extensions of the third lines between the central stations and the pads.

Claim 79. Allowable over Crane because it is dependent from claim 77. Also allowable over Crane because of the recitation in lines 2-11 of additional functions for the extensions of the third lines between the central station and the pads.

Claim 80. Allowable over Crane in the recitation of a first line in lines 8-10, a plurality of second lines in lines 11-14, a plurality of third lines in lines 15-18 and extensions of the third lines in lines 19-28.

Claim 81. Allowable over Crane because it is dependent from claim 80. Also allowable over Crane because it recites in lines 2-9 of additional functions for the extensions of the third lines between the central station and the pads.

Claim 82. Allowable over Crane in the recitation in lines 8-10 of a first line, in the recitation in lines 11-13 of a second line, in lines 14-16 of a third line and in lines 18-20 of second means.

Claim 83. Allowable over Crane because it is dependent from claim 82. Also allowable over Crane in the recitation in lines 2-3 that the first means stores the first and second binary indications in the pad in a parallel form and is the recitation in lines 4-5 that the second means transfers the binary indications in the first means to the third line in a serial form.

Claim 84. Allowable over Crane because it is dependent from claim 82. Also allowable over Crane in the recitation in lines 2-4 of additional functions of the first line, in the recitation in lines 5-6 that the central station provides through the first line to the pad signals identifying the vehicle selected by the pad and in the recitation in lines 7-9 that the central station provides identifying signals to the pad in synchronism with the clock signals on the second line during the time that a second voltage different from the first voltage is produced on the first line.

Claim 85. Allowable over Crane because it is dependent from claim 84.

Claim 86. Allowable over Crane in the recitation in lines 8-10 of the first line, in lines 11-12 of a second line, in line 15-18 of second means operative during the production of the first voltage on the first line for performing the recited function and in

lines 19-22 of third means operative during the production of the second voltage on the first line for performing the recited function.

Claim 87. Allowable over Crane because it is dependent from claim 86.

Claim 88. Allowable over Crane in (a) the recitation in lines 16-19 of the disconnection of a particular pad from the central station, (b) the recitation in lines 20-22 of the interrogation of the other pads by the central station, without any interrogation of the particular pad, instantaneously after the disconnection of the particular pad, (c) the recitation in lines 23-26 of the transmission from the other pads to the central station, without any transmission of indications from the particular pad to the central station, instantaneously after the disconnection of the particular pad from the central stations, (d) the recitation in lines 27-31 of the third means and (e) the recitation in lines 33-38 of the fourth means.

Claim 89. Allowable over Crane because it is dependent from claim 88.

Also allowable over Crane in the recitation in lines 2-5 that the first means is operative to interrogate the pads, other than the disconnected pad, instantaneously after the disconnection of the pad from the central station.

Claim 90. Allowable over Crane because it is dependent from claim 88.

Also allowable over Crane in the recitation in lines 2-6 of the simultaneous interrogation of the pads in the plurality before the disconnection of the particular one of the pads from the central station and the interrogation of the pads, other than the particular one of the pads, simultaneously and instantaneously after the disconnection of the particular one of the pads from the central station.

Claim 91. Allowable over Crane because it is dependent from claim 88. Also allowable over Crane in the recitation in lines 7-9 of the seventh means and in lines 10-12 of the eighth means.

Claim 92. Allowable over Crane in the recitation in lines 19-21 of the first means, in lines 22-24 of the second means and in lines 25-28 of the third means.

Claim 93. Allowable over Crane because it is dependent from claim 92. Also allowable over Crane in the recitation in lines 2-6 that the first means is operative to interrogate the pads in the plurality and the additional pad instantaneously after the connection of the additional pad to the central station.

Claim 94. Allowable over Crane because it is dependent from claim 92.

Also allowable over Crane in the recitation in lines 2-6 that the first means is operative to interrogate simultaneously the pads in the plurality and the additional pad instantaneously after the connection of the additional pad in the central station.

Claim 95. Allowable over Crane because it is dependent from claim 92. Also allowable over Crane in the recitation in lines 6-9 of the fifth means.

Claim 96. Allowable over Crane because it is dependent from claim 1. Also allowable over Crane in the recitation in lines 3-6 of means in the central station for discontinuing the operation of the vehicle by the individual one of the pads instantaneously after the individual one of the pads is disconnected from the central station and for providing for the addressing of the vehicle by any one of the pads still connected to the central station.

Claim 97. Allowable over Crane because it is dependent from claim 5. Also allowable over Crane because it recites in lines 3-6 means in the central station for providing for

the operation of the individual one of the vehicles by any one of the pads still connected to the central station instantaneously after the individual one of the pads is disconnected from the central station.

Claim 98. Allowable over Crane because it is dependent from claim 66. Also allowable over Crane in the recitation in lines 2-3 that the central station provides indications, through the third line for each of the pads, to such pad of the individual one of the vehicles addressed by such pad and the recitation in lines 4-6 of means in each of the pads for indicating the individual one of the vehicles addressed by such pad in accordance with the indications provided by the central station to such pad through the third line for such pad.

Claim 99. Allowable over Crane because it is dependent from claim 75.

Claim 100. Allowable over Crane in the recitation in lines 17-19 of fourth means in the central station for providing a transmittal by the second means at each instant only of the second binary indications from the pads which are providing changes in address or commands at that instant.

Claim 101. Allowable over Crane in the recitation in line 20 of an additional pad connected in the central station and in lines 21-25 of fifth means in the central station for providing an addressing by the additional pad of any vehicle not being addressed by the other pads and for providing for a transmission of this address by the central station to the vehicles instantaneously after the additional pad is connected to the central station. Also allowable in the recitation in lines 17-19 of fourth means in the central station for providing a transmittal by the second means at each instant only of the second binary indications from the pads which are providing changes in address or commands at that instant.

Claim 102. Allowable over Crane in the recitation in lines 12-15 of fourth means in the central station for providing a transmittal by the second means at each instant only of the second binary indications from the pads which are providing changes in address or commands at that instant.

Claim 103. Allowable over Crane because it is dependent from claim 102. Also allowable over Crane in the recitation in lines 2-5 that the first means in the central station is operative to simultaneously interrogate the pads to obtain simultaneously from the pads the first binary indications providing the address for the individual ones of the vehicles and the second binary indications providing the commands for operating the individual ones of the vehicles.

Claim 104. Allowable over Crane in the recitation in lines 8-11 of the third means relating to complementary commands from pads and in lines 12-15 of the fourth means relating to contradictory commands from pads.

Claim 105. Allowable over Crane because it is dependent from claim 104.

Also allowable over Crane in the recitation in lines 2-5 of the fifth means.

Claim 106. Allowable over Crane because it is dependent from claim 23.

Claim 107. Allowable over Crane because it is dependent from claim 23.

Also allowable over Crane in the recitation in lines 2-3 that the first means is operative to interrogate the pads in the plurality and the additional pad simultaneously and the recitation in lines 4-7 that the second means is responsive to the simultaneous interrogations provided by the first means for performing the recited function.

Claim 108. Allowable over Crane in the recitation in lines 17-20 of third means for transmitting on a priority basis any change in the address or commands from an individual one of the pads relative to the address and commands from the other pads.

Claim 109. Allowable over Crane because it is dependent from claim 108. Also allowable over Crane because it recites in lines 2-4 that the central station discontinues an interrogation of any pad which is disconnected from the central station instantaneously after the pad is disconnected from the central station.

Claim 110. Allowable over Crane because it is dependent from claim 108. Also allowable over Crane because it recites in lines 2-7 that the central station transmits the address and commands from the individual one of the pads only when the central station has completed the transmission of the address and commands of the pad whose address and commands the central station has been transmitting at the time that the central station receives the change in the address and commands from the individual one of the pads.

Claim 111. Allowable over Crane in the recitation in lines 16-22 of third means for transmitting on a priority basis the address and commands from an additional pad newly connected to the central station relative to the transmission of the address and commands from the pads in the plurality.

Claim 112. Allowable over Crane because it is dependent from claim 111.

Also allowable over Crane in the recitation in lines 2-4 that the central station is operative to transmit to the vehicles at each instant only the addresses and commands from the pads which are providing changes in addresses or commands at that instant.

Claim 113. Allowable over Crane because it is dependent from claim 111. Also allowable over Crane for substantially the same reasons as set forth above for claim 110.

Claim 122. Allowable over Crane in the recitation in lines 16-19 of fourth means in the central station for transmitting to the vehicles in the plurality only the address and commands transmitted from each pad to the central station that are different from the immediately preceding address or command transmitted from such pad to the central station.

Claim 123. Allowable over Crane because it is dependent from claim 122. Also allowable over Crane in the recitation in lines 2-4 that the first means is operative to interrogate the pads simultaneously.

Claim 124. Allowable over Crane in the recitation in lines 17-22 of a plurality of second switches operative in a second relationship to provide for a simultaneous addressing of a vehicle by two (2) pads and the recitation in lines 28-33 of third means for providing for the illumination in the second one of the pads of the vehicle being addressed by such pad even when the vehicle is simultaneously being addressed by another one of the pads.

Claim 125. Allowable over Crane because it is dependent from claim 124. Also allowable over Crane in the recitation in lines 2-5 of means in the central station for transmitting the address and commands from the individual one of the pads and the other one of the pads to the vehicle addressed by the individual one of the pads when the second switch in the individual one of the pads is in the second state of operation.

Claim 126. Allowable over Crane in the recitation of the second means in lines 16-19 and in the recitation in lines 20-22 of third means for extinguishing the light in a vehicle addressed by a pad when the pad becomes disconnected from the central station.

Claim 127. Allowable over Crane because it is dependent from claim 126. Also allowable over Crane in the recitation in lines 2-4 of fourth means operable for eliminating the storage of the addressing by each individual one of the pads of the individual one of the vehicles when a pad becomes disconnected from the central station.

Claim 128. Allowable over Crane because it is dependent from claim 127. Also allowable over Crane in the recitation in lines 8-12 of seventh means operable when a pad becomes disconnected from the central station

Claim 146. Allowable over Crane in (a) the recitation in lines 14-17 of means in the receiving means for providing pulse width modulations for energizing the motors in the vehicle to move the vehicle, successive ones of the pulse width modulations providing progressive increments of time in the pulse widths for energizing the motors to accelerate the vehicle and (b) the recitations in lines 18-20 of means in the receiving means for energizing the motors with the successive ones of the pulse width modulations having the progressive increments of time in the pulse widths to accelerate the motors in the vehicle.

Claim 147. Allowable over Crane because it is dependent from claim 146. Also allowable over Crane in the recitation in lines 2-4 that the widths of the pulse width modulations are progressively incremented for the progressive increments of time from a zero time in the pulse width modulations to accelerate the motors in the vehicle.

Claim 148. Allowable over Crane in the recitation in lines 7-14 of a central station for transmitting to the vehicles signal packets having start bits at the beginning of the packets and in lines 22-24 of means in the central station for regulating the rate of transmitting the bits in the packets to the vehicles in accordance with the time between the start bits in the successive packets of the binary information.

Claim 149. Allowable over Crane because it is dependent from claim 148.

Claim 152. Allowable over Crane because it is dependent from claim 66. Also allowable over Crane in the recitation in lines 2-3 of additional functions for the thin lines.

Claim 153. Allowable over Crane because it is dependent from claim 104. Also allowable over Crane in the recitation of the memory with the features set forth in lines 2-4 and in the recitation in lines 5-7 of the execution means for providing an execution by the vehicle of the special command when the commands in the vehicle are contradictory.

Claim 154. Allowable over Crane because it is dependent from claim 108. Also allowable over Crane in the recitation in lines 2-5 of the initiation of the interrogation by the central station of any pad which is connected to the central station, instantaneously after the pad is connected to the central station, to determine if the pad had addressed any one of the vehicles not then being addressed by any of the other pads.

Claim 159. Allowable over Crane in the recitation in lines 9-11 of pads connected to the central station for interrogation simultaneously by the central station and in the recitation in lines 12-14 of first means responsive in the pads to the simultaneous interrogation by the central station of the switches in the pads for transmitting to the central station binary indications of the states of operation of the pads.

Claim 160. Allowable over Crane because it is dependent from claim 159. Also allowable over Crane in the recitation in lines 2-5 that the first means is responsive in the pads to the simultaneous interrogations by the central station of the state of operation of the switches in the pads for simultaneously transmitting to the central station the binary indications of the states of operation of the switches in the pads.

Claim 161. Allowable over Crane because it is dependent from claim 159. Also allowable over Crane in the recitation in lines 2-5 that the central station is responsive in the binary indications to the states of operation of the switches in the pads for transmitting to the vehicles in sequence the signals representing the binary indications for the different pads.

Claim 162. Allowable over Crane in the recitation in lines 5-7 of first means for simultaneously interrogating the pads to determine from the pads the vehicles addressed by the pads and the functions to be performed in the addressed vehicles.

Claim 163. Allowable over Crane because it is dependent from claim 162. Also allowable over Crane in the recitation in lines 2-4 that the third means are simultaneously responsive to the binary indications from the pads to simultaneously provide the signals representing the binary indications.

Claim 164. Allowable over Crane because it is dependent from claim 163. Also allowable over Crane in the recitation in lines 2-3 that the fourth means is operative to transmit in sequence to the vehicles in the plurality the signals representing the binary indications from each individual one of the pads.

4. Applicant should like to briefly review the prosecution file history in the parent application and this continued prosecution application:

a. In an Office Action dated 7/8/98 in the parent application, the Examiner rejected claims 1-151 on the following grounds:

i. Claims 1-151 on the ground of double patenting with co-pending application 08/578,210 (now patent 5,944,609);

ii. Claims 1-151 on the ground of double patenting with co-pending application 08/696,263 (now patent 5,885,159);

iii. Claims 1-151 as anticipated by Yavetz or Rosenhagen or as obvious in view of a combination of references selected from Yavetz, Rosenhagen, Stern, Mabuchi and Yang.

b. Applicant filed an amendment on 12/9/98 in the parent application in response to the Office Action dated 7/8/98. With this amendment, applicant filed a terminal disclaimer with respect to application 08/578,210 and a terminal disclaimer with respect to application 08/696,263. Applicant set forth reasons in the amendment why the claims were allowable over the cited prior art. In spite of the allowability of the claims over application 08/578,210, applicant filed the terminal disclaimer to advance the prosecution of the patent application.

c. On 4/29/99, the Examiner issued an Office Action in the parent application in response to the amendment filed on 12/9/98. This Office Action constituted a final rejection. In this Office Action, the Examiner allowed claims 1-13, 18-22, 30, 32-35, 40-42, 57-60, 63-80, 82-91, 96-99, 104, 106, 124, 125, 148, 149, 152, 153, and 162-164 and objected to claims 101, 102 and 128. The Examiner rejected claims 61, 62, 146 and 147 as being anticipated by Rosenhagen and the remaining claims under 35 U.S.C. § 103 (a) as being unpatentable over various combinations of references including Rosenhagen, Stern and Yavetz.

d. On August 20, 1999, applicant filed in the parent application a third supplemental amendment in which he retained only the allowed claims in the application. Since applicant retained only the allowed claims in the parent application, applicant expected to receive a notice of allowance in the parent application. Applicant also filed on August 13, 1999, a continued prosecution application and a preliminary amendment in this continued prosecution application. The continued prosecution application related to the claims still under rejection on the basis of prior art in the Office Action dated 4/29/99.

e. On 12/29/99, the Examiner issued an Office Action in the continued prosecution application. The Examiner rejected all of the claims as anticipated by Crane. These included the claims which had been allowed by the Examiner in the parent application.

f. This amendment has been prepared in response to the Office Action dated 12/29/99 in the continued prosecution application.

It would appear that applicant and the Examiner are back to square one, or perhaps even to a position before square one, in the prosecution of this continued prosecution application. In the Office Action dated 7/8/98 in the parent application, the Examiner rejected all of the claims on the basis of double patenting with respect to application 08/578,210 (now the Crane patent cited in this Office Action. According to the Examiner on page 3 of the Office Action dated 7/8/98:

“The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject

matter, as follows: a plurality of toy vehicles with control from any of a plurality of controllers with a central station to issue commands.”

In the amendment filed on 1/19/99 in the parent application, applicant indicated that each of the claims in the parent application recited features which were not disclosed in copending application 08/578,210. However, to advance prosecution in the parent application, applicant elected to file a terminal disclaimer in accordance with an indication by the Examiner in the Office Action dated 7/8/98 that applicant could file a terminal disclaimer to overcome the rejection on the basis of application 08/578,210. The Examiner then abandoned, in the Office Action dated 4/29/99 in the parent application, application 08/578,210 as a prior art reference in the parent application.

Applicant respectfully submits that, in view of the prior action by the Examiner in the parent application with respect to application 08/578,210 (now Crane patent 5,944,609 cited by the Examiner in this continued prosecution application) and particularly in view of the terminal disclaimer filed by applicant in the parent application, the Examiner is now estopped from applying the Crane patent as a prior art reference against the claims in this continued prosecution application. However, applicant has filed this amendment to provide a record which establishes the allowability over the Crane patent of each of the claims now in this continuation application and which specifies the reasons for the allowability of each of the claims over the Crane patent.

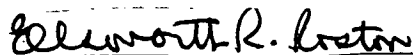
If the Examiner decides that estoppel does not apply and if the Examiner rejects the claims on the basis of Crane or allows the claims over Crane, the terminal disclaimer filed in the parent application with respect to the Crane patent should no longer apply. This is also true with respect to the terminal disclaimer with respect to application 08/696,263 (now patent 5,885,159).

5. Applicant is prepared to present in clean form all of the claims now in this continued prosecution application if the Examiner should request. Applicant is prepared to present the claims in clean form in an attempt to simplify the work of the Examiner in case the Examiner should decide that the presentation of the claims in clean form will help the Examiner in determining the allowability of the claims. The presentation of the claims in clean form may also simplify the work of the Patent Office in printing the patent to be issued from this continued prosecution application after this continued prosecution application has been allowed.

6. Please charge any additional costs in connection with this amendment to Account No. 06-2425.

7. Reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,



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